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DRAFT

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URBANIZATION, CHURCH AND SOCIAL CONTROL
A SURVEY OF LUSAKA, ZAMBIA, 1973
SUMMARY OF QUANTITATIVE RESULTS
PART 2. USOCO RESULTS BOOK I

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USOCO output Book 1 consists (as ordered from top to bottom) of the output specified below. The chapters of the present report (not in any way reflected in the original Book 1) will discuss parts of this output as indicated

Note: * marks output which did not call for further discussion in this report

job's serial number pages comments

Chapter 1. The original data, 192 cases

AO 429 IR 224, labels, 192 cases, original

AO 922 SZ 231, date: 19.08.75 1-10 *original USOCO data file
codebook 192 cases

AO 339 AW 234, date: 22.08.75 *fastmarg and cross tabs, or
little interest, 192 cases

AO 436 SQ 364, date: ? 1 *first USOCO file with 165
variables; selection criteria not
clear from this output

*followed by an unnumbered page with date modifications on 165-cases
file

AO 372 XP 248, date: 4.9.75-14 *master run, 765 cards: data
modification,
labels,

construction of new variables,
165 cases; V001-V144, V200-
V228, V230-V262, V270-V290,
V292-V298, V344, V357-V367

AC J51 QJ 253, date: c. 8.9.75 *DUMP COMPLETE: all labels, no
tabulation nor statistics

AO 363 W1 261, date: 18.9.75 1-2 *data file to tape: LABEL, TAPE, W,
L=BINS, YSN=S98700, D=PE

Chapter 2. First statistical analyses, 165 cases

AO 362 W0 261, date: 19.9.75 1-2 *tape test with one sign test

AO 977 OX 260, date: 17.9.75-16 cross tabs in three dimensions,
165 cases

AO 030 TL 260, date: 17.9.75 1-24 cross tabs, 165 cases
AO 755 BV 259, date: 16.9.75 1-120 cross tabs, 165 cases

AO 696 11 283, date: 9.10.75-3 *creation new variables: V800,
V837, V819, V833, V739, V962,
V699, V781, V812, V770, V960,
V666

AO 638 BN 252, date: 9.9.75 1-9 testing out SPSS statistics

AO 484 44 248, date: 5.9.75 1-5 *testing out SPSS statistics

AO 265 W7 255, date: 12.9.75 1-3 testing out SPSS statistics

AO 310 61 255, date: 12.9.75 1-4 testing out SPSS statistics

AO 971 M8 260, date: 17.9.75 1-4
 T tests, U tests
 AO 780 HB 259, date: 16.9.75 1-33
 various statistical analyses
 AO 365 W3 261, date: 18.9.75 1-5
 *various statistical analyses

AO regression, date: 16/9/75
 *incomplete; only included
 matrix of 49 variables, including
 many constructed ones, but no
 guttman scales yet
 AO 775 GT 356, date: 22.12.75 1-2
 *the variables constructed in AO
 696 11 283, date: 9.10.75 (see
 above) further recorded

Chapter 3. Guttman scale analysis

AO 925 06 357, date: 23.12.75-6
 *begin Guttman scale analysis:
 GUT237
 AO 959 BM 357, date: 23.12.75 1-25
 Guttman scale analysis: GUT237,
 GUT238, GUT241, GUT242,
 GUT344, GUT253, GUT274,
 GUT286
 AO 952 CZ 357, date: 23.12.75 1
 *just 'attaching' data file
 AO 040 YR 358, date: 24.12.75 1-66
 Guttman scale analysis: GUT298
 AO 047 4E 358, date: 24.12.75 1-66
 Guttman scale analysis: GUT237,
 GUT238, GUA241, GUB241,
 GUT286, GUB286, GUT235,
 GUT244, GUT261, GUT234
 AO 072 7Q 358, date: 24.12.75 1-34
 Guttman scale analysis: GUT298
 AO 077 77 358, date: 24.12.75 1-14
 Guttman scale analysis: GUA252,
 GUB252, GUC252
 AO 092 AO 358, date: 24.12.75 1-100
 Guttman scale analysis: GUA298,
 GUB298, GUC298, GUD298,
 GUT237, AGUT261, BGUT261,
 GUT359, BGUT252, AGUT252,
 GUT298
 AO 208 JB 363, date: 29.12.75 1-60
 Guttman scale analysis: GUT283,
 GUT284, GUT359, GUT251,
 GUT289, GUT281, GUT255,
 GUT287, GUT254, GUT236,
 GUT239
 AO 210 JP 363, date: 29.12.75 1-66
 Guttman scale analysis: GUT238,
 BGUT261, GUT359, GUA359,
 GUB359, GUC359, GUD359,
 GUE359, GUF359, BUA252,
 BUB252, BUC252
 AO 211 JQ 363, date: 29.12.75 1-138
 Guttman scale analysis: GUT298,
 GUB298, GUA298, GUB298

CHAPTER 1. THE ORIGINAL DATA, 192 CASES

Chapter 1. The original data, 192 cases

Originally 192 cases were processed.

V006

sex household	cases	%
male	184	95.8
female	5	2.6
no information/not interpretable	3	1.6
total	192	100

The head of household is not necessarily the respondent, although in practice this was nearly always the case, see below.

V031

marital status	cases	%
unmarried, widowed, divorced	15	7.8
married with one wife	165 ¹	85.9
married two wives, one in Lusaka	4	2.1
married at least two resident wives in Lusaka	3	1.6
married, but wife/wives outside Lusaka	1	.5
not interpretable	3	1.6
no information	1	.5
total	192	100

The selection which led to a final data file of 165 is not immediately clear from this table, although obviously in an analysis of urban marriage these data were among the principal selection criteria. It is certain that female heads of household (or which there were at least 5) were excluded from the final data file. And so were all other female respondents. See output 'original codebook'.

V144

sex respondent – not necessarily household	cases	%
male	182	94.8
female	10	5.2
total	192	100

Omission of the female respondents and female heads of household makes the analysis entirely man-centred, but this is justified in the light of

This is clearly not the same 165 cases as constituted the later final data file – the latter also contains polygamous married men.

the emphasis on male chauvinism, status insecurity etc. However, it is clear that the present analysis does not offer a full picture.

It is of little importance to work through the straight counts on the 192 data file, since all further analysis was based on a selection of 165 cases.

In the light of subsequent analyses it is meaningless to work through the output of A0 339 AW 234, date: 22.08.75, pp. 1-30: fastmarg and cross-tabs, since this deals with the original 192 cases and therefore a totally different data file.

CHAPTER 2. FIRST STATISTICAL ANALYSES, 165 CASES

Chapter 2. First statistical analyses, 165 cases

2.1. A0 977 0X 260, date: 17.9.75, pp. 1-16: cross-tabs in three dimensions, 165 cases

Controlling for descent system husband/wife: descent system husband/wife identical. Even so considerable discrepancy from expectation, when asked 'to whom do children belong?':

children are claimed to belong to

descent system husband ¹	matrilineal	bilateral	patrilineal	total
mother's kin	23	0	0	23
both	7	6	3	16
father's kin	45	8	19	72
total	75	14	22	111

Also cf similar output in Book II results

Still controlling descent system husband/wife: descent system husband/wife identical:

descent system husband²

	matrilineal	bilateral	patrilineal	total
can divorced wife keep children?	18	1	1	20
no	59	13	21	93
total	77	14	22	113

Here of course it would be interesting to have the female respondents' views included, however, this is not (yet) the case.

If the husband belongs to a church and the wife does not (i.e. controlling for V223), then the pattern of total religious anchorage of marriage (V254) is somewhat interesting: 15 cases meet this condition, and in all 15 cases the total religious anchorage of the marriage is 0. We are dealing here with 10 Roman Catholics, 3 CCZ and 2 other members of 'other' churches. This is interesting, but not entirely surprising: not only church intervention in wedding, but also church membership itself (V055, V090), has contributed to the construction of V254. However, it

¹ Since we control for descent system husband/wife, this means that descent system of the husband is also that of the wife.

² Since we control for descent system husband/wife, this means that descent system of the husband is also that of the wife.

Chapter 2. First statistical analyses, 165 cases
 it is clear that no church intervention in wedding takes place if wife does not belong to a church.

host wife?	host wife husband?		total
	yes	no	
yes	6	7	13
no	6	129	135
			148

occupation	type of income				total
	regular	piecework	self-employed	no work	
manual unskilled	45	6	6	3	60
(semi-)skilled	32	5	0	1	38
low clerical	9	0	0	0	9
middle/high cler.	14	0	0	0	14
domestic	9	1	0	1	11
commerc./entrepr.	4	0	7	0	11
other	5	0	1	0	6
	118	12	14	5	149

2.2. A0 030 TL 260, date: 17.9.75, pp. 1-24: cross-tabs, 165 cases

There is no relation between being disciplined, and the fact that the present marriage is the first marriage:

ever disciplined?	is present marriage first?		total
	yes	no	
yes	10	6	16
no	50	23	73
			89

$\chi^2 = .03, df = 1, s = .87, ns.$

There is some indication that first marriages are more likely to be contracted in church, but the association is not significant:

is present marriage first? yes no total

married in church?

yes	14	3	17
no	78	50	128
total	92	53	145

$$\chi^2 = 2.12, df = 1, s = .15, ns$$

$$1 = 3.28, df = 1, .10 > s > .05$$

There is some association between type of church and the type of bridewealth:

bridewealth arrangement	church husband grouped			
	Roman Catholic	CC2	EF2	total
paid full	25	16	2	54
paid part	14	11	1	29
asked not paid	6	0	0	6
asked nor paid	6	2	0	9
total	51	29	3	98

$$\chi^2 = 12.13, df = 15, s = .67, ns$$

1 = ...

However, if in the above table the Roman Catholics are contrasted with all others, then a significant association emerged: the Roman Catholics score less on 'paid full' and 'paid part', and more on 'asked not paid' and 'asked nor paid' than the others. Possibly this reflects church prejudice among Catholics towards bridewealth; but it is also possible that a degree of urbanization, or regional and ethnic background, plays some part here. See a breakdown of churches according to tribes, which perhaps is somewhere in the output.

Some puzzling association is found between bridewealth arrangement, and church membership of either spouses:

church husband / wife	bridewealth arrangement				total
	hu ch	wi none	wi ch	hu nor wi	
both same	8	5	27	39	81
both ch	2	3	7	17	39
but diff	0	0	10	4	17
total	15	5	44	50	114
paid full	8	2	27	39	81
paid part	5	3	7	17	39
asked not paid	2	1	10	4	17
asked nor paid	0	0	7	8	15
total	15	6	51	68	152

$\chi^2 = 21.31, df = 12, s = .046, s$

However, the pattern is very difficult to interpret and may be due to change or to underlying, intervening variables.

The effect of regional missions (more than any other factor, such as the intrinsic attractiveness of certain types of churches from the point of view of certain descent systems), can be seen from the following:

church husband grouped	descent system				total
	Roman Catholic	CCZ	CCZ+	EFZ	
matrilineal	2	15	2	2	63
bilateral	1	6	1	1	10
patrilineal	8	8	0	0	18
other	0	0	0	0	2
total	51	29	3	3	98

$\chi^2 = 28.63, df = 15, s = .02, s$

A similar pattern, equally hard to interpret, is found in the association between church and identity of descent system between husband and wife:

church husband grouped	descent system					total
	Roman Catholic	CC2	CC2+	EF2	indep	
yes	42	20	0	3	1	71
no	10	3	3	0	0	18
total	52	23	3	3	1	89

$\chi^2 = 13.92, df = 5, s = .02, s = \dots$

Among members of certain churches a greater degree of identity of descent system is found than among others. One might surmise that this is related to the extent to which that church, by intervening in marriage, is capable of offering such anchorage to the marriage as provides an alternative for the customary legal system reflected in the descent rules. If this hypothesis would hold, then one would in general expect church members to have a lower degree of descent identity than non-church members. Has this been cross-tabulated yet?

Similar tendency could underlie the very weak association between identity of tribe between husband and wife, and identity of church between husband and wife:

husband's tribe is wife's?	church husband / wife				total
	hu ch	hu none	wi ch	wi none	
yes	6	3	34	43	91
no	9	3	12	19	49
total	15	6	51	68	152

$\chi^2 = 8.68, df = 4, s = .07, ns$

$\chi^2 = 8.40, df = 4, s = \dots, ns$

There is a significant association between the husband's descent system, and whether the present marriage is a first marriage:

		descent system husband					
		matrilineal bilateral		patrilineal		other	
		total		total		total	
is present	yes	51	11	24	3	89	
	no	39	6	6	0	51	
total		90	17	30	3	140	

$\chi^2 = 7.08, df = 3, s = .07, ns$
 $I = 8.38, df = 3, s = \dots, s$

The matrilineals in the sample are more likely to be in their second marriage. How to explain:

- their marriages are more unstable
- they are older in the sample?

See other output.

It is interesting (and alarming) that the above association does not appear when not descent systems, but broad tribal groupings are assessed as to the primacy of the present marriage:

		broadest tribal husband					
		Bemba	Tonga	Nyanja	Lozi	Tumbuka	other
		total					
is present	yes	6	13	36	11	8	15
	no	5	5	27	6	3	5
total		11	18	63	17	11	20

$\chi^2 = 3.63, df = 5, s = .60, ns$
 $I = \dots$

2.3. A0 755 BV 259, date: 16.9.75, pp. 1-120: cross-tabs, 165 cases

Husband broad tribal by suburb: per suburb and per tribe only one or two cases, with few concentrations:

- 24 cases in Kalingalinga, of which 7 Tonga and 8 Nyanja
- 47 cases in Bauleni, of which 26 Nyanja
- 25 cases in Kamanga, of which 15 Nyanja

Very similar pattern when broadest:

No significant association between:

occupation and made garden;

occupation and people came for advice;

There is some association between occupation and broad tribal, which appears again in broadest tribal:

husband's occupation	husband broad tribal					total
	Bemba	Tonga	Nyanja	Lozi	Tumbuka	
manual unskilled	5	6	30	4	9	59
(semi-)skilled	1	7	16	7	1	35
low cler.	0	0	4	0	2	9
mid/high cler.	4	1	2	1	0	11
domestic	0	2	5	3	0	11
comm./entrepr.	1	2	3	1	2	11
other	1	1	2	1	1	8
total	12	19	62	17	15	144

$\chi^2 = 41.86, df = 30, s = .07, ns$

l = ...

Yet, when in the above table contrast is made between manual (skilled and unskilled) and non-manual, then significant association appears (l = 12.83, \$), The suggestion is that Bemba and 'other' are less involved in manual work than Tonga, Nyanja, Lozi and Tumbuka.

husband's type of income	husband broad tribal					total
	Bemba	Tonga	Nyanja	Lozi	Tumbuka	
regular	10	15	43	16	12	110
piecework	1	1	7	1	0	12
self-employed	2	1	9	0	1	16
unemployed	0	2	0	1	2	6
total	13	19	60	18	15	144

$\chi^2 = 15.43, df = 15, s = .42, ns$

l = ...

The emphasis on piecework among the Nyanja may be related to the fact that they are a large ethnic group which can survive in town even outside the formal sector.

Being disciplined is significantly associated with full church membership:

full church member?		does not know		total
yes	no	yes	no	
15	1	0	1	16
43	31	1	1	75
58	32	1	1	91
total				

$\chi^2 = 7.57, df = 2, s = .02, \$$

1 = ?

Similarly, there is a significant association between being disciplined and receiving church sacraments; which is understandable, since being disciplined means being enabled to continue to receive sacraments.

receive sacraments?		total	
yes	no	yes	no
12	4	16	69
30	39	69	85
total			

$\chi^2 = 3.98, df = 1, s = .046, \$$

1 = ?

Please note that the variable 'ever disciplined' takes on the value 'missing' if the respondent is not a member of a church.

This makes it all the more interesting that there is some suggestion of a positive association between being disciplined and church marriage (however, it is also possible that once one has marriage in church, one is the more liable to being disciplined (the expectations, and the formal incorporation and subjugation of the marital state to church regulations, is then much greater):

married in church		disciplined? ever		total
yes	no	yes	no	
6	9	14	61	70
20	70	15	75	90

$$\chi^2 = 2.17, df = 1, s = .14, ns$$

1 = ?

These cases, of course, are all of church members.

The association is significant between being disciplined and polygamy:

husband polygamous		disciplined? ever		total
yes	no	yes	no	
3	14	17	78	92
4	78	17	79	96

$$\chi^2 = 2.17, df = 1, s = .14, ns$$

1 = ?

The data show no significant association between being disciplined and church grouped.

There is no association between place of marriage, and married in church:

married in church		where married?		total
yes	no	town	rural area	
9	49	58	90	127
21	127	58	90	148

$$\chi^2 = .02, df = 1, s = .90, ns$$

1 = ?

There is, however, a significant association between place of marriage and bridewealth arrangements:

where married?	bridewealth arrangement			total
	paid full	paid part	asked not paid	
town	27	18	12	60
rural area	54	22	5	93
total	81	22	5	93

$\chi^2 = 11.08, df = 3, s = .01, \$$
 $1 = ?$

The manifest pattern is that rural bridewealth patterns are significantly more final and harmonious, whereas the urban pattern is defective: in the urban marriages score higher on paid part and asked not paid.

There is no significant association between place of marriage and polygamy:

where married?	husband polygamous		total
	yes	no	
town	3	60	63
rural area	4	91	95
total	7	151	158

$\chi^2 = .05, df = 1, s = .82, ns$
 $1 = ?$

There is no significant association between place of marriage and urban/rural place of birth husband ($\chi^2 = 1.82, df = 1, s = .18$). However, there is such a significant association as far as wives are concerned:

where married?	place of birth wife		total
	urban	rural	
town	13	41	54
rural area	2	89	91
total	15	130	145

$\chi^2 = 15.21, df = 1, s = .00, \$$
 $1 = ?$

Similarly, there is a significant association between the place of marriage, and the identity of tribe between husband and wife:

where married?	husband's tribe = wife's tribe		total
	yes	no	
town	23	34	57
rural area	69	17	86
total	92	51	143

$$\chi^2 = 22.06, df = 1, s = .00, ns$$

1 = ?

The same conclusion holds when tribes are grouped.

Similarly, there is a significant association between place of marriage and identity of place of birth between husband and wife:

where married?	husband's place (district) of birth is wife's		total
	yes	no	
town	13	47	60
rural area	75	17	92
total	88	64	152

$$\chi^2 = 50.94, df = 1, s = .00, \$$$

1 = ?

The majority of urban marriages is between people who do not come from the same rural district!

There is a tendency for place of marriage to be associated with broadest tribal husband:

where married?	broadest tribal husband						total
	Bemba	Tonga	Myanja	Lozi	Tumbuka	other	
town	8	8	25	5	1	10	57
rural area	5	12	39	13	11	9	89
total	13	20	64	18	12	19	146

$$\chi^2 = 9.96, df = 5, s = .076, ns$$

1 = ?

Also there is a significant association between place of marriage and order of marriage:

$\chi^2 = 4.46, df = 1, s = .03, \$$
 $1 = ?$

is present marriage first?		where married?	
yes	no	town	rural area
31	27	58	89
64	25	95	52
total		147	

A larger proportion of urban marriages are later marriages, whereas rural marriages tend to be first marriages.

Place of marriage of course is significantly associated with marriage between kin:

$\chi^2 = 7.11, df = 1, s = .01, \$$
 $1 = ?$

related before marriage?		where married?	
yes	no	town	rural area
8	49	57	90
40	107	147	

Marriages between kinsmen are significantly more frequent among rural marriages.

The pattern of bridewealth arrangement is in line with expectations as far as marriage between kinsmen is concerned, even if the data do not lead to significant results:

$\chi^2 = 4.11, df = 3, s = .25, \$$
 $1 = ?$

related before marriage?		bridewealth arrangement					
yes	no	total	paid full	paid part	asked not paid	asked nor paid	total
24	53	77	8	31	16	6	148
8	31	39	2	14	16	10	40

The bridewealth pattern for kinsmen is less 'defective' or 'conflictive'. In fact, it is meaningful to recalculate the above table (and all others

that concern bridewealth arrangements), contrasting harmonious (full, nor) and conflictive (part, not) arrangements.

There is a significant association between marriage between kinsmen and the husband's descent system:

related before marriage?	husband's descent system			
	matrilineal	bilateral	patrilineal	other total
yes	23	9	5	37
no	66	9	24	103
total	89	18	29	140

$\chi^2 = 7.85, df = 3, s = .049, \$$
 $l = ?$

Here, the patrilineals tend to score lower on related before marriage, the bilaterals higher. In addition to systematic structural tendencies in bilateral descent systems, there may be the Shigowe effect here. When broken down in broad tribal grouping, it turns out that the 16 Nkaya cases contain as many as 9 (56.3%) cases of related before marriage, against the Tumduka (otherwise also liable to the Shigowe effect) only 2 cases out of 12 (16.7%). I am therefore inclined to take the information on related before marriage with a pinch of salt.

There is, not surprisingly (since kinsmen tend to belong to the same tribe) a significant association between related before marriage, and identity of tribe between husband and wife:

related before marriage?	husband's tribe = wife's?		total
	yes	no	
yes	28	9	37
no	58	43	101
total	86	52	138

$\chi^2 = 3.10, df = 1, s = .078, ns$
 $l = 4.01, df = 1, s = \dots, \$$

Yet it is remarkable that, of tribal-endogamous marriages, over 2/3 (67.4%) are not between kinsmen. In a part of the world where the mothers brothers daughter marriages is preferential!

There is a significant association between related before marriage, and marriage order:

related before marriage?	is present marriage first?		total
	yes	no	
yes	19	30	49
no	74	104	142
total	93	142	142

$\chi^2 = 4.61, df = 3, s = .03, \$$
 $l = ?$

There is a significant association between occupation and church marriage:

husband's occupation	married in church?		total
	yes	no	
manual unskilled	1	57	58
(semi-)skilled	6	32	38
low cler.	1	6	7
mid/high cler.	5	8	13
domestic	2	8	10
comm./entrepr.	3	8	11
other	2	6	8
total	20	125	145

$\chi^2 = 16.74, df = 6, s = .01, \$$
 $l = \dots$

Manual unskilled tend to marry less in church, domestic, commercial/entrepreneurial and other tend to marry more in church. There is no association, however between church marriage and type of income (146 cases, $\chi^2 = .51, df = 3, s = .92, ns$). Neither is there an association between marriage in church, and in local court:

married in local court?
yes no total

yes	3	18	21
no	15	117	132
total	18	135	153

$\chi^2 = .00, df = 1, s = .98, ns$
1 = ?

There is a significant association between church marriage and type of church (grouped):

type of church	Roman Catholic	CCZ	CCZ+	EFZ	indep	other	total
married in church?	12	1	2	2	1	2	20
no	37	27	1	0	2	7	74
total	49	28	3	2	3	9	94

$\chi^2 = 16.90, df = 5, s = .00, \$$

CCZ members tend to marry less in church

Membership of the same church is almost a necessary (but not a sufficient) condition for church marriage:

church husband / wife	hu ch	hu none	hu nor wi	both same	both ch	but diff	total
married in church?	0	1	0	19	1	1	21
yes	14	5	50	57	10	1	126
total	14	6	50	66	11	1	147

$\chi^2 = 22.27, df = 4, s = .00, \$$

1 = ...

This effect also when identity of church group is assessed

Marriage in church is not related to husband's urban/rural place of birth ($\chi^2 = .26$, $df = 1$, $s = .61$, ns). However, it has a significant association with the urban/rural place of birth of the wife:

married in church?	place of birth wife		total
	urban	rural	
yes	5	13	18
no	10	114	124
total	15	127	142

$\chi^2 = 4.55$, $df = 1$, $s = .03$, \$

1 = ...

Difficult to interpret, unless one can say that the church marriage pattern is largely determined by the wife, and much less by the husband

Something similar becomes apparent when we associate married in church with husband/wife rural/urban place of birth:

married in church?	husband/wife born urban/rural?			total
	both urban	husband urban, wife rural	husband rural, wife urban	
yes	1	0	4	18
no	1	3	9	124
total	2	3	13	142

$\chi^2 = 7.33$, $df = 3$, $s = .062$, ns

1 = 5.93, $df = 3$, $s = \dots$, almost \$

No significant association between married in church/husband broadest tribal (142 cases, $\chi^2 = 3.02$, $df = 5$, $s = .70$, ns).

No significant association between bridewealth arrangement/occupation (150 cases, $\chi^2 = 10.40$, $df = 10$, $s = .92$, ns).

No significant association between bridewealth arrangement/type of income (150 cases, $\chi^2 = 11.61$, $df = 9$, $s = .24$, ns).

No significant association between bridewealth arrangement/children belong (149 cases, $\chi^2 = 6.15$, $df = 6$, $s = .41$, ns).

Chapter 2. First statistical analyses, 165 cases

There is however a significant association between bridewealth arrangement / husband born urban/rural. When the original four categories are retained, the association is not significant (159 cases, $\chi^2 = 4.11$, $df = 3$, $s = .25$, ns). However, when harmonic arrangements are contrasted with disharmonious, significance is achieved:

bridewealth arrangement	husband born		total
	urban	rural	
harmonic (full, nor)	7	95	102
disharmonious (part, not)	0	57	57
total	7	152	159

$1 = 6.39$, $df = 1$, $s = .00$, $\$$

This is however contrary to expectation: the rural marriages are more 'disharmonious' in their bridewealth arrangements. A different hypothesis might be in order here: in rural marriages, the sense of obligation and reciprocity is expressed in disharmonious (in fact: uncompleted) arrangements, whereas in urban marriages it is once for all, therefore completed (harmonic would then seem a useless term).

Of the urban marriages here, 6 were paid full, and 1 neither asked nor paid.

Here, rather puzzling, there is not the slightest association between bridewealth arrangements and wife's urban/rural place of birth (146 cases, $\chi^2 = .37$, $df = 3$, $s = .95$, ns).

There is a significant association between bridewealth arrangement and the husband's descent system:

bridewealth arrangement	husband's descent system				total
	matrilineal	bilateral	patrilineal	other	
paid full	47	13	19	1	80
paid part	20	4	12	1	37
asked not paid	11	1	1	1	14
neither asked nor paid	15	0	0	1	16
total	93	18	32	4	147

$$\chi^2 = 16.30, df = 9, s = .061, ns$$

1 = ...

There is a significant association between bridewealth arrangement and the husband's descent system:

bridewealth arrangement	tribe husband = wife		total
	yes	no	
paid full	55	24	79
paid part	13	24	37
asked not paid	10	4	14
neither asked nor paid	14	1	15
total	92	53	145

$$\chi^2 = 20.25, df = 3, s = .00, \$$$

1 = ...

Here again the complete/incomplete pattern as noted above. However, the relationship seems rather complex. One cannot offhand say that the complete pattern is either urban or rural. However, the opportunity to effectuate affinal claims in the rural (as opposed to the urban) context, and the desire to extract money earned in migrant labor through bridewealth arrangements, appears to constitute important aspects here. But how?

Similar pattern when bridewealth arrangements are associated with village home husband = wife:

bridewealth arrangement	village home husband = wife		total
	yes	no	
paid full	56	25	81
paid part	17	18	35
asked not paid	10	7	17
neither asked nor paid	13	1	14
total	96	51	147

$$\chi^2 = 9.86, df = 3, s = .02, \$$$

1 = ...

Where village home husband = wife, the completed pattern prevails; when not, the uncompleted pattern. This suggests that the completed pattern is more rural and kin orientated in its implications. But how?

No significant association between bridewealth arrangement and order marriage (149 cases, $\chi^2 = 3.01$, $df = 3$, $as = .39$, ns).

There is no significant association between total amount paid for bridewealth, and the number of cattle paid for marriage (120 cases, Kendall's tau C = .02, ns).

There is, of course, a significant association between wife's occupation and wife's type of income:

occupation	wife	no occupation or job	manual unskilled	(semi-)skilled	low clerical	middle/high cler.	domestic	commerc./entrepr.	other	total
type of income wife		0	0	0	0	1	1	0	3	5
regular		0	1	0	0	0	0	0	0	1
piecework		0	0	2	0	0	0	7	2	11
self-employed		0	0	0	0	0	0	0	0	1
unemployed		0	0	0	0	0	0	0	2	2
unpaid/vol.		0	0	0	0	0	0	0	7	7
total		1	1	2	0	1	1	7	20	20

There is a significant association between husband's occupation, and his ideas concerning the ownership of the children:

occupation	children belong	father's	mother's	both	total
husband		39	27	6	72
manual unskilled		15	3	5	30
(semi-)skilled		27	6	5	38
low clerical		6	2	0	8
middle/high cler.		8	2	3	13
domestic		2	5	4	11
commerc./entrepr.		7	0	3	10
other		3	0	4	7
total		92	30	22	144

$\chi^2 = 31.32$, $df = 12$, $s = .00$, $\$$

The pattern is not so clear-cut, and difficult to interpret.

ideas concerning the ownership of children are likely to be tested in a context of divorce, when a decision has to be taken concerning the guardianship of the children. While the association on this point is significant, it is less overwhelming than one would perhaps expect:

children belong to	can divorced wife keep children?		total
	yes	no	
father's	7	90	97
mother's	15	14	29
both	4	20	24
total	26	124	150

$\chi^2 = 30.87, df = 2, s = 00, \$$

Yet almost half of the men who claimed that children belong to the mother's family, get state that the mother cannot retain them upon divorce!

The following has already been recorded for Book II, but here again: there is a significant (but again not overwhelming) association between the ideas concerning ownership of the children, and the husband's descent system:

children belong to	husband's descent system			total
	matrilineal	bilateral	patrilineal	
father's	55	9	227	291
mother's	25	0	0	25
both	10	8	4	22
total	90	17	31	140

$\chi^2 = 29.38, df = 6, s = 00, \$$

check whether this table is identical; with same variables cross-tabulated elsewhere

There is a significant association between husband broadest tribal (also broad tribal and tribal, but there categories are very small), and children belong:

children belong to	husband broadest tribal						total
	Bemba	Tonga	Nyanja	Lozi	Tumbuka	other	
father's	5	14	41	9	10	14	93
mother's	3	3	19	0	0	0	25
both	5	0	2	8	2	5	22
total	13	17	62	17	12	19	140

$\chi^2 = 42.86, df = 10, s = .00, \$$

There is perhaps reason to suspect that class, income, education, occupation, of the urban respondents involved, are important underlying variables here, more than tribe itself.

There is a significant association between divorced wife keep children, and occupation:

occupation	divorced wife can keep children?		total
	yes	no	
manual unskilled	17	43	60
(semi-)skilled	2	36	38
low clerical	0	9	9
middle/high cler.	2	13	15
domestic	4	7	11
commerc./entrepr.	0	11	11
other	2	6	8
total	27	125	152

$\chi^2 = 16.07, df = 6, s = .01, \$$

Manual unskilled, domestic and other tend to answer more in favour of the wife keeping the children. This is difficult to interpret, although it might mean that urban success and male chauvinism are positively correlated.

No association between type of income and divorced wife can keep children (152 cases, $\chi^2 = .66, df = 3, s = .88, ns$).

Neither a significant association between divorced wife can keep children, and type of bridewealth arrangement (156 cases, $\chi^2 = 4.11, df = 3, s = .25, ns$).

The logic behind these answers may appear when we associate divorced wife can keep children with the explanations given for this attitude:

divorced wife can keep children	reasons given for attitude divorced wife keep children		total
	customs, rights	future, upkeep	
yes	9	3	12
no	31	54	85
	40	57	97

$$\chi^2 = 4.95, df = 1, s = .026, s$$

In other words, when the mother is favoured as guardian, the male respondents invoke rights and customs; when not, pragmatic economic reasons are invoked.

Yet there are strange effects at work here. This becomes apparent when divorced wife can keep children is associated with the attitudes on women working:

divorced wife can keep children	husband's view on women working		total
	yes	no	
good: contribute income	5	44	49
good: other reason	1	6	7
good, reason?	3	21	24
good nor bad	0	1	1
bad: place at home	8	11	19
bad: too independent	0	5	5
bad: other	0	8	8
bad: reason?	7	12	19
	24	108	132

When, in the above, the positive and negative views on women working are contrasted, the result is:

husband's view on women working	divorced wife can keep children		total
	yes	no	
good	9	71	80
neutral	0	1	1
bad	15	36	51
	24	108	132

$$1 = \dots, \$$$

Men who favour women working tend to be more opposed to women keeping their children after divorce, then men who are against women working. Why?

There is a significant association between the nature of the explanations given for view on guardianship after divorce, and the type of income:

reasons given for attitude divorced wife keep children	total
type of income	
regular	28
piecework	5
self-employed	3
unemployed	4
total	40
customs, rights	
future, upkeep	43
total	71
total	98

$$\chi^2 = 8.84, df = 3, s = .03, \$$$

The pattern is as expected. It also suggests that the scale of declining urban commitment is:

self-employed > regular > piecework > unemployed

There is a significant association between explanations for wife's guardianship after divorce, and bridewealth arrangement:

reasons given for attitude divorced wife keep children

bridewealth arrangement	total
paid full	26
paid part	7
asked not paid	4
neither asked nor paid	3
total	40
customs, rights	
future, upkeep	18
total	55
total	95

$$\chi^2 = 10.19, df = 3, s = .017, \$$$

Does this still follow the earlier complete/incomplete (harmonic...) pattern? The association seems to be that those who paid full, tend to invoke customs and rights, and all others tend to invoke pragmatic reasons. There is no evidence here of a special association between paid full and asked not paid.

Perhaps again Shigowe effect when relating descent system husband to explain divorced children:

reasons given for attitude divorced wife keep children	total
descent system	
husband	
matrilineal	17
bilateral	12
patrilineal	8
other	1
total	38
customs, rights	
future, upkeep	
total	53
total	91

$$\chi^2 = 7.41, df = 3, s = .06, ns$$

$$l = 7.41, df = 3, s = .06, ns$$

There is an association here with tribe:

reasons given for attitude divorced wife keep children
 customs, rights
 future, upkeep
 total

tribe	husband	total
Bemba	2	6
Tonga	5	3
Nyanja	9	26
Lozi	12	5
Tumbuka	6	4
other	4	9
total	38	53
total		91

$$\chi^2 = 13.87, df = 5, s = .017, \$$$

The categories stressing customs and rights are Tonga, Lozi and Tumbuka – perhaps they are the less urbanized or less modernized sections of the sample, as against the more pragmatically-oriented Bemba, Nyanja and other. But it is difficult to distinguish, with this sort of material between urbanization, class and neo-traditionalist orientation. Perhaps the multivariate analysis and the Guttman scales will help us out on these points.

As expected, there is a significant association between knowledge on Ordinance marriage, and occupation:

knowledge on Ordinance marriage	occupation					total
	manual unskilled	(semi-)skilled	low clerical	middle/high cler.	domestic	
exactly	2	5	1	3	2	12
rather well	9	1	0	6	2	18
not very well	6	6	0	2	2	16
not at all	24	16	7	3	4	54
total	37	28	8	14	10	93

$\chi^2 = 32.45, df = 18, s = .02, \$$

In fact the H statistic would be more appropriate here. Manual unskilled, (semi-)skilled and low clerical tend to have lesser knowledge on this point, than middle and higher clerical, domestic, commercial/entrepreneurial and other.

However, there is no significant association between knowledge of Ordinance marriage, and type of income (108 cases, $\chi^2 = 6.41, df = 9, s = .70, ns$; in fact the H statistic would be more appropriate here.)

There is a cross check possible here: of the 5 cases who claimed to have married under Ordinance, 4 have an exact knowledge, and 1 rather well.

Knowledge of ordinance marriage is significantly associated with appreciation:

knowledge of Ordinance marriage	is Ordinance marriage good?		total
	yes	does not know	
exactly	12	0	12
rather well	6	1	7
not very well	7	3	10
not at all	12	25	37
total	37	29	66

Kendall's tau C = .15, \$\$\$

There is no significant association between ideas on family spacing and occupation (116 cases, $\chi^2 = 5.51, df = 6, s = .48, ns$).

There is no significant association between ideas on family spacing and type of income (116 cases, $\chi^2 = .86$, $df = 3$, $s = .84$, ns). The expected association with class is difficult to substantiate.

There is however a significant association with husband/wife born urban/rural:

ideas on family spacing	husband/wife born urban/rural?				total
	both urban	husband urban/wife rural	husband rural/wife urban	both rural	
at least 3 years	0	4	7	91	111
less, normal	1	1	7	91	100
total	1	1	7	91	111

$$\chi^2 = 9.68, df = 3, s = .02, \$$$

In fact the H statistic would be more appropriate here. The result is difficult to interpret. If anything, one gets the impression that the more urban the couple, the less they are in favour of extensive family spacing – which runs counter to the class hypothesis on family spacing.

When good and bad categories are contrasted, there is a significant association between ideas on women working, and husband born urban/rural:

ideas on working women	husband born urban/rural		total
	urban	rural	
good	5	75	80
neutral	0	1	1
bad	0	52	52
total	5	128	133

$$1 = ?? \$$$

Urban-born husbands are all in favour of women working, and little more than half of the rural born husbands.

An important factor in this appears to be the fact whether the spouses are actually both having an income:

ideas on working women	income spouses				total
	both	wife only	husband only	neither	
good	16	1	58	2	77
neutral	0	0	1	0	1
bad	1	0	47	3	51
total	17	1	106	5	129

$\chi^2 = 22, df = 1, p < .001$

If so, the husband is more inclined to be in favour of women working.

There is no significant association between church husband grouped, and husband/wife church ($\chi^2 = 8.88, df = 1, p = .54, ns$). In other words, differences in church membership between the spouses are found throughout the sample without specific effects clearly standing out.

There is the suggestion of an association between descent system husband, and the identity between descent system of husband and wife:

descent system husband	descent husband = wife?		total
	yes	no	
matrilineal	81	13	94
bilateral	14	4	18
patrilineal	22	10	32
total	117	27	144

$\chi^2 = 4.92, df = 2, p = .086, ns$

$\chi^2 = 4.62, df = 2, p = .099, ns$

When the category bilateral (Shigowwe effect) is ignored, the effect is significant ($\chi^2 = 4.46, df = 1, p = .033, ns$): matrilineals have a greater tendency to marry among each other than patrilineals. This of course is a matter of availability: patrilineals are a minority in Lusaka, from distant homelands in Northern and Eastern Province.

Association between descent system husband and broadest tribal husband exists per definition: a value for the descent system is assigned on the basis of tribe.

descent system		husband broadest tribal					total	
husband	matrilineal	Bemba	Tonga	Nyanja	Lozi	Tumbuka		other
matrilineal	14	20	55	0	0	0	7	96
bilateral	0	0	0	18	0	0	0	18
patrilineal	0	0	9	0	0	15	10	34
other	0	0	0	0	0	0	4	4
total	14	20	64	18	15	21	152	

It is interesting that the Nyanja group is partly patrilineal (Ngoni), and that contrary to what I seemed to remember, the Tumbuka are patrilineal. **check!**

Marriage within the same tribe is not the only way to allow the marriage to be underpinned by the same descent system, adhered to by both spouses. In fact, about half of all intertribal marriages are still within the same descent system:

descent husband = wife?		tribe husband = wife?		total
yes	no	yes	no	
92	0	92	52	144
25	27	27	52	
117	27	117	144	

$$\chi^2 = 55.43, df = 1, s = 00, \$$$

There are significant differences between the broadest tribal groups in terms of tribal intermarriage:

tribe husband = wife		husband broadest tribal					total	
yes	no	Bemba	Tonga	Nyanja	Lozi	Tumbuka		other
8	6	9	11	14	4	4	6	54
14	11	48	14	14	4	15	15	94
20	17	62	25	28	8	19	21	148

Bemba, Tonga and other score low on intra-tribal marriage, Nyanja, Lozi and Tumbuka high; however, we would note that 'husband broadest tribal'

³This identity exists by definition.

is in itself already an ethnic cluster, which may be rather heterogeneous (Nyanja = matrilineal Chewa and Nsenga along with patrilineal Ngoni).

There is also a significant association between 'broadest tribal husband' and identity descent system husband/wife:

tribe husband = wife	husband broadest tribal					total
	Bemba	Tonga	Nyanja	Lozi	Tumbuka	
yes	12	17	55	14	10	117
no	2	3	7	4	3	27
	14	20	62	18	13	144

$$\chi^2 = 11.88, df = 5, s = .037, \$$$

Nyanja, and to a much lesser extent the Bemba and Tonga, tend to marry more into the same descent system, whereas 'other' tend to marry into a different descent system.

There is a tendency for tribal group identity wife/husband (V247) to be associated with occupation. This is not significant when all occupational categories are taken into consideration ($\chi^2 = 10.76, df = 6, s = .096, ns$). However, when only manual (i.e. manual unskilled, semiskilled, and domestic) is contrasted with non-manual, then significance is attained:

tribe husband = wife (grouped)	occupational category			total
	manual	non-manual	total	
yes	80	20	100	40
no	22	18	40	140
	102	38	140	

Also in earlier cross-tabulations it was clear that it is meaningful to take manual unskilled, (semi-)skilled and domestic together. However, some of these have not been copied from Book I into the present report. **Check!**

There is a significant association between broadest tribal husband, and people came for advice:

	people came for					
	husband broadest tribal	Bemba	Tonga	Nyanja	Lozi	Tumbuka
yes	7	5	13	31	13	7
no	5	7	12	22	4	4
total	12	18	53	53	17	11

$\chi^2 = 10.95, df = 5, s = .052, ns$

$t = 11.28, df = 5, s = ., \$$

The pattern of ethnic distribution in suburb clusters can be assessed from the table below. Statistical analysis is meaningless, but when plotted one could establish whether the geographical location is a reflection of the geographical provenance of these migrants.

	husband broadest tribal					
	Bemba	Tonga	Nyanja	Lozi	Tumbuka	other
North	0	1	0	0	0	1
Northwest	1	0	1	4	0	0
Maripodi Chaisa	0	0	0	4	1	1
Central low density	1	1	0	0	0	0
Northeast	2	2	6	3	2	4
Chelston	1	3	16	2	4	0
Old Airport	3	10	12	2	0	6
Bauleni	4	4	26	0	6	7
South low density	0	0	0	1	0	1
Sw med. dens.	2	0	1	0	1	0
Kanyamas	0	1	0	2	0	0
Chavama	0	0	1	0	0	1
total	14	20	63	18	14	20

2.4. A0 638 BN 252, date: 9.9.75, pp. 1-9: testing out SPSS statistics

Pearson correlation: year of birth/duration present marriage: 128 cases, $r = -.70, s = .00$

T test:

year of birth householder, broken by polygamy:

value of nominal var.	n	m	st dev	F	s?
1: yes, polygamous	7	1929.57	10.21	1.03	ns
2: no, not polygamous					

$F = 1.03, ns, \text{ pooled var. estim. } T = -.52, df = 148, \text{ 2-tail prob. } .132, \text{ one tailed } .066, ns$

There is no significant association between duration of present marriage, and occupation: analysis of variance, $F = 1.14$, $df = 6$ and 125 , $s = .34$.

(Perhaps there is if first compensated for age?)

There is no significant association between duration of present marriage, and type of income: analysis of variance, $F = .081$, $df = 3$ and 127 , $s = .49$.

(Perhaps there is if first compensated for age?)

There is no significant association between maximum present church involvement and polygamy: U test, 165 cases, $z = .35$, 2-tailed $s = .72$ (corrected for ties)

There is no significant association between maximum present church involvement and place where joined church: U test, 96 cases, $z = -1.42$, 2-tailed $s = .15$ (corrected for ties)

There is no significant association between total religious anchorage of marriage and place where joined church: U test, 96 cases, $z = -.80$, 2-tailed $s = .42$ (corrected for ties)

2.5. A0 265 W7 255, date: 12.9.75, pp. 1-3: testing out SPSS statistics

There is a significant association between total religious anchorage of marriage and place where joined church: Kruskal Wallis test, corrected for ties: $\chi^2 = 17.15$, $s = .009$, \$.

n	156	78.5
manual unskilled	61	62.0
(semi-)skilled	40	84.7
lower clerical	10	88.8
middle/high clerical	15	106.7
domestic	11	83.4
commerce/entrepr	11	84.4
other	8	92.3
total	156	78.5

Middle/higher clerical tend to be higher, manual unskilled tend to be lower.

2.7. A0 971 M8 260, date: 17.9.75, pp. 1-4: T tests, U tests

T test:
No significant association between monthly income, and family spacing:

value of nominal var.		n	m	st dev
1. 3 years or more	check	11	85.73	74.82
2. less, normal		63	45.22	27.50

F = 7.40, s = .00, \$, separ. var. estim.: T = 1.77, df = 10.48, 2-tail prob. .106, one tailed .053, nearly \$

Fits hypothesis of class background family spacing.

T test:
No significant association between duration present marriage, and married in church:

value of nominal var.		n	m	st dev
1. married in church		18	11.94	8.86
2. no		113	10.04	7.80

F = 1.29, s = .42, ns, pooled var. estim.: T = .86, df = 21.41, 2-tail prob. .40, one tailed .20, ns

T test:
Significant association between duration present marriage, and tribe husband = wife:

value of nominal var.		n	m	st dev
1. yes		79	10.81	8.23
2. no		46	7.54	6.43

F = 1.64, s = .075, \$, separate var. estim.: T = 2.46, df = 112.63, 2-tail prob. .015, one tailed .008, \$

When tribe husband = wife, marriage has lasted longer

T test:
 No significant association between year of birth householder, and tribe
 husband = wife:

value of nominal var.	n	m	st dev
1. yes	86	1934.73	9.86
2. no	49	37.12	11.09

F = 1.27, s = .34, ns, pooled var. estim.: T = -1.29, df = 133, 2-tail prob.
 .198, one tailed .099, ns

T test:
 Significant association between monthly income, and tribe husband =
 wife:

value of nominal var.	n	m	st dev
1. yes	62	K42.08	K33.04
2. no	36	K61.03	K47.71

F = 2.09, s = .01, \$, separate var. estim.: T = -2.11, df = 54.77, 2-tail prob.
 .04, one tailed .02, \$

When tribe husband different from tribe wife, monthly income is larger

T test:
 Significant association between duration present marriage, and descent
 husband = wife:

value of nominal var.	n	m	st dev
1. yes	98	10.44	8.20
2. no	23	6.48	4.78

F = 2.95, s = .005, ns, separate var. estim.: T = 3.06, df = 56.78, 2-tail
 prob. .003, one tailed .0015, \$

When descent system hu = wi, marriage has lasted longer

T test:
 No significant association between year of birth householder, and people
 came for advice:

value of nominal var.	n	m	st dev
1. yes	72	1934.82	11.27
2. no	54	1936.69	9.57

F = 1.39, s = .21, ns, pooled var. estim.: T = -.98, df = 124, 2-tail prob.
 .329, one tailed .165, ns

U test:

No significant association between maximum present church involvement, and tribe wife = husband: U test, corrected for ties, 148 cases, $z = -.45$, 2-tailed $s = .65$.

U test:
No significant association between degree present urban family orientation, and tribe wife = husband: U test, corrected for ties, 138 cases, $z = -.45$, 2-tailed $s = .65$.

U test:
Significant association rural orientation urban marriage, and tribe wife = husband: U test, corrected for ties, 148 cases, $z = -6.97$, 2-tailed $s = .00$.

value	n	Ray
yes	94	92.9
no	54	42.5

If no, rural orientation urban marriage is lower

Note: tribe husband = wife did not contribute towards the ordinal variable

U test:
No significant association between total family mobilization in crisis, and tribe wife = husband: U test, corrected for ties, 148 cases, $z = -1.50$, 2-tailed $s = .134$, one-tailed .067, ns

U test:
No significant association between past and present dyadic orientation, and tribe wife = husband: U test, corrected for ties, 148 cases, $z = -.31$, 2-tailed $s = .76$, one-tailed .38, ns

U test:
Significant association between securities anchoring marriage, and tribe wife = host tribe: U test, corrected for ties, 158 cases, $z = -2.64$, 2-tailed $s = .00$.

value	n	Ray
yes	14	48.8
no	144	82.5

If no, securities anchoring marriage lower

U test:
 Significant association between total family anchorage of marriage, and
 tribe wife = host tribe: U test, corrected for ties, 158 cases, $z = -2.36$, 2-
 tailed $s = .018$, \$.

value	n	Rav
yes	14	52.9
no	144	82.1

If no, total family anchorage of marriage lower

U test:
 No significant association between total family mobilization in crisis,
 and is present marriage first: U test, corrected for ties, 152 cases, $z =$
 $-.97$, 2-tailed $s = .33$, one-tailed .17, ns

There is a significant association between continuous education of
 husband, and occupation
 Kruskal Wallis test, corrected for ties: $\chi^2 = 53.95$, $s = .00$, \$.

n	Rav
58	48.6
37	77.9
8	89.4
15	124.9
11	79.5
9	79.6
8	106.8

total 146 73.5

Manual unskilled tend to have very low, middle/high clerical and other
 tend to have very high education

There is a significant association between continuous education of
 husband, and type of income
 Kruskal Wallis test, corrected for ties: $\chi^2 = 13.63$, $s = .00$, \$.

n	Rav
114	80.6
11	48.8
16	51.3
6	54.9

total 147 74.0

Those in regular employment tend to have best education, and all others
 limited education

There is a significant association between continuous education of husband, and broadest tribal husband
 Kruskal Wallis test, corrected for ties: $\chi^2 = 12.64$, $s = .03$, \$.

	n	Ray
Bemba	12	87.6
Tonga	18	84.9
Nyanja	62	58.3
Lozi	18	79.5
Tumbuka	12	77.0
other	19	76.9
total	141	71.0

Bemba tend to have slightly better education, Nyanja rather less education

There is a significant association between maximum present church involvement, and church husband grouped
 Kruskal Wallis test, corrected for ties: $\chi^2 = 16.41$, $s = .00$, \$.

	n	Ray
Roman Catholic	54	53.9
CC2	30	41.2
CC2+EF2	3	86.7
EF2	3	96.2
indep.	3	58.3
other	9	42.7
total	102	51.5

CC2 and other tend to have lower, CC2+EF2 and EF2 higher; however, numbers are small

There is a significant association between degree present urban family orientation, and descent system husband
 Kruskal Wallis test, corrected for ties: $\chi^2 = 25.26$, $s = .00$, \$.

	n	Ray
matrilineal	96	68.4
bilateral	18	122.5
patrilineal	34	74.0
other	4	85.8
total	152	76.5

Bilateral tend to be much higher; Shigowe effect? Note that patrilineal (including Tumbuka) are yes somewhat below average.

There is a significant association between rural orientation urban marriage, and descent system husband
 Kruskal Wallis test, corrected for ties: $\chi^2 = 9.37$, $s = .025$, \$.

n	Ray
96	71.3
18	102.1
34	80.8
4	50.1
152	76.5

Bilaterals tend to be higher

2.8. A0 780 HB 259, date: 16.9.75, pp. 1-33: various statistical analyses

There is a significant association between year married (V070) and total amount paid for bridewealth (V081). The scattergram plot is rather convincing in this respect. See photocopy

insert photocopy scattergram about here

E.g. with one exception (c. K200) all bridewealth before 1951 < K50, whereas in later years one sees a steady rise of the cluster. However, the relationship is not very strong, due to a few extreme values. $R = .21$, $R^2 = .04$, 105 cases, sign. $R = .03$, \$ (but low). It would be better to recalculate R with omission of the extreme values.

F test: there is no significant association between duration present marriage (V212) and descent system husband (V233): $F = 1.09$, $df = 3$ and 127 , $s = .36$, ns.

F test: there is a significant association between year of birth and occupation (V039)

value	mean	st dev	n
manual unskilled	1931.93	10.46	57
(semi-)skilled	1935.35	9.08	37
low clerical	1939.89	8.77	9
mid/high cler.	1943.25	4.35	12
domestic	1937.73	12.60	11
commerc./entrepr.	1936.13	12.67	8
other	1940.43	9.33	7
total	1935.41	10.35	141

F = 3.14, df = 6 and 134, s = .01, \$

Main difference is that manual unskilled tend to be older than all other categories!

F test: there is no significant association between year of birth and type of income (V040)

value	mean	st dev	n
regular	1935.75	9.83	112
piecework	1936.00	11.18	9
self-employed	1933.07	10.71	15
unemployed	1927.17	12.95	6
total	1935.12	10.20	142

F = 1.61, df = 3 and 138, s = .19, ns

The unemployed are clearly the extreme group in the above table. When a T test is performed upon unemployed against all others, the result is significant: T = -.97, df = 1450, s = .03, \$. The unemployed tend to be older than all others.

F test: there is no significant association between year of birth and husband broad tribal (V217) (F=1.06, df = 14 and 124, s = .41)

F test: there is no significant association between year of birth and husband broad tribal (V360) (F=.71, df = 5 and 133, s = .62). Remarkably, the Bemba and the Lozi are among the younger

cases, the Nyanja tend to be older than all others; however, these impressions are not in the least significant:

value	mean	st dev	n
Bemba	1938.10	8.90	10
Tonga	1935.4	12.16	18
Nyanja	1934.32	10.34	60
Lozi	1939.00	7.79	18
Tumbuka	1935.21	9.97	14
other	1936.37	11.51	19
total	1935.71	10.30	139

F test: there is a significant association between monthly income (V041) and occupation (V039):

value	mean	st dev	n
manual unskilled	K32.93	K15.71	43
(semi-)skilled	K57.87	K32.36	23
low clerical	K39.13	K13.03	8
mid/high cler.	K107.00	K52.98	12
domestic	K32.67	K13.78	9
commerc./entrepr.	K70.83	K89.35	6
other	K71.75	K56.25	4
total	K50.95	K41.30	105

F = 8.56, df = 6 and 98, s = .00, \$

Manual unskilled and domestic tend to be lower, all others somewhat higher, middle/higher clerical much higher than average.

F test: there is a significant association between monthly income (V041) and type of income (V040)

value	mean	st dev	n
regular	K54.62	K36.66	84
piecework	K29.42	K7.40	7
self-employed	K55.14	K86.31	7
unemployed	0	0	6
total	K49.81	K41.40	104

F = 4.24, s = .01, \$

self-employed and regulars tend to be higher, piecework lower, and unemployed actually zero

No significant association between monthly income (V041) and husband broad tribal (V217), F test, F = 1.30, df = 12 and 89, s = .23, ns

No significant association between monthly income (V041) and husband broad tribal (V360), F test, $F = 1.58$, $df = 5$ and 96 , $s = .17$, ns

The distribution is yet interesting:

value	mean	st dev	n
Bemba	K79.00	K76.92	9
Tonga	K34.27	K22.39	11
Nyanja	K45.07	K25.06	43
Lozi	K42.73	K26.97	15
Tumbuka	K51.73	K68.32	11
other	K52.85	K28.64	13
total	K48.26	K39.48	102

Interestingly, the Bemba are rather above average, and both the Bemba and the Tumbuka have extremely high standard deviations: very heterogeneous groups in terms of income.

Kruskal Wallis: there is a significant association between continuous education husband (V362) and occupation (V039):

value	Rav	n
manual unskilled	48.55	58
(semi-)skilled	77.88	37
low clerical	89.44	8
mid/high cler.	124.90	15
domestic	79.45	11
commerc./entrepr.	79.56	9
other	106.81	8
total	73.50	146

χ^2 corrected for ties: 53.95, $s = .00$ \$

Kruskal Wallis: there is a significant association between continuous education husband (V362) and type of income (V040):

value	Rav	n
regular	80.63	114
piecework	48.77	11
self-employed	51.28	16
unemployed	54.92	6
total	74.00	147

χ^2 corrected for ties: 13.63, $s = .00$ \$

Interestingly, those unemployed have not the lowest education; those in regular employment however tend to have the highest education.

CHAPTER 3. GUTTMAN SCALE ANALYSIS

Many runs were necessary before decent Guttman scales could be constructed, that can replace the crude intuitive scales which have the same variable number but preceded by V... in stead of GUT... The acceptability of a Guttman scale is measured by the coefficient of reproducibility (should be at least .9) and the coefficient of scalability (should be at least .6). The important thing is to find the division point in the constituting variable: the value above which the total scale value of the Guttman scale will be enhanced by one point. This is a question of trial and error. See SPSS handbook. Usually the values of the constituting variables are recoded before the Guttman scales are constructed, the output describes this process in detail but it does not need to concern us here.

Results:

see appendix table 2

(insert: appendix table 2)

Some of these Guttman scales incorporate exactly the same variables as the original intuitive scales (V...). This applies to:
 GUT242
 GUT274
 and more or less to GUT244 and GUT344 (the latter two might perhaps be added to produce a new scale?)

V261 must be replaced by two different scales, AGUT261 (views on Ordinance marriage and on working women) and BGUT261, between which there is a weak negative correlation!

Likewise, V252 is a bad variable, which is to be replaced by two different Guttman scales: BGUT252 and AGUT252.

It is interesting to compare the Guttman scales with the intuitive variables which they are to replace (table from purple protocol book):

number	V	GUT	Kendall's tau	s
237			.846	.00
238			.906	.00
239			.891	.00
241			.531	.00
242			.514	.00
251			.298	.00
252		GUA	.522	.00
252	252	GUB	-.031	.28
253			.955	.00
254			.729	.00
255			1.00	.00
261	261	GUA	.022	.34
261	261	GUB	.658	.00
274			1.00	.00
281			.702	.00
283			.702	.00
286			.961	.00
287			.541	.00

A comparison of all independent continuous variables, V005-GUT274, on Kendall's tau and R_{xy} , shows that these match rather well in terms of significant and direction (sign) of the correlation (what does this remark mean?).

APPENDIX TABLE 2: GUTTMAN SCALES

Guttman scale	constituting variables and division points	coefficients reprod. scalab.	date	output
237	no Guttman scale could be constructed		28.12.75	
235	no Guttman scale could be constructed	.93	24.12.75	
236	no Guttman scale could be constructed	.97	28.12.75	
237	V051(2) V055(2) V058(3) V061(2) V064(2) V065(2) V124(2) V201(2)	.96	30.12.75	
238	V090(2) V093(3) V094 (2) V203(2)	.91	28.12.75	
239	V201(2) V055(2) V058(3) V061(2)	.91	28.12.75	
241	V037(3) V047(2) V121 (2)	.82	28.12.75	
242	V122 (2) V123(2)	.75	30.12.75	
244	V088(2) V115(2) V116(2) V117(2) V290 (2) V292 (2) V262(2) V270(2)	.91		
251	V075(2) V077(2) V079(2)	.94	29.12.75	
AGUT252	V248(2) V246(2) V290(1.35) V292(2) V262(2) V270(2)	.72	29.12.75	
80UT252	V075(2) V083(2) V084(2) V086(2)	.64	28.12.75	
253	V073(2) V076(1.5) V082(2) V088(2)	.99	29.12.75	
254	V222(4) V223(4) V077(2) V085(2)	.99	29.12.75	
255	V050(2) V125(2)	.93	28.12.75	
AGUT261	V130 (3) V132(2)	.79	29.12.75	
80UT261	V133(2) V134(2) V135(2) V136(2) V137(2) V139(2)	.98	28.12.75	
274	V110(2) V115(2) V116(2) V117(2)	.93	29.12.75	
281	V076 (1.5) V087(2) V115(2) V082(2) V073(2)	.76	29.12.75	
283	V11(2) V122(2)	.96	29.12.75	
284	no Guttman scale could be constructed	.97	28.12.75	
286	V050(2) V086(2) V114(2)	.89	30.12.75	
287	V040(3) V218(5)		30.12.75	
289	no Guttman scale could be constructed			
298 ²	V279(2) V256 (2)	.93	29.12.75	
344	V076(1.5) V082(2) V073(2)	.92	28.12.75	
359	no Guttman scale could be constructed		30.12.75	

¹ Note: AGUT252 overlaps with GUT244; V252 is evidently a bad variable.

² V279 = descent wife; V256 = hu-wi both income; however, the Guttman scale appears to be an artifact: these variables, with these division points, do not correlate with each other, neither with the scale (R in both cases = 0), but I am not sure that the latter is a correct way of reasoning. When the division point of V256 is set at (3), the coefficients assume the same values as at (2).